

*****CONFIDENTIAL*****
*****PREDECISIONAL DOCUMENT*****

SFUND RECORDS CTR
2274892

**SUMMARY SCORESHEET
FOR COMPUTING PROJECTED HRS SCORE**

SITE NAME: CONTINENTAL HEAT TREATING

CITY: SANTA Fe SPRINGS COUNTY: LOS ANGELES

EPA ID#: CAD 053858296 EVALUATOR: LORI PARNASS

PROGRAM ACCOUNT#: V-999-252-02 DATE: 05/31/01

LAT/LONG: Lat 33 56' 0.9" Long 118 04' 28.0" T/R/S: 3S, 11W/Section 6

THIS SCORESHEET IS FOR A PA: X SI: _____ OTHER: _____
RCRA STATUS (check all that apply): STATE SUPERFUND STATUS:

_____ Generator _____ DTSC Annual Work Plan
_____ Small Quantity Generator (formerly BEP) (Date) _____
_____ Transporter _____ WQARF (Date): _____
_____ TSDF _____ No State Superfund
_ Not Listed in RCRA Database as of _____
Date of Printout: Status (Date): _____

	S Pathway	S ² Pathway
Groundwater Migration Pathway Score (S_{gw})	66.10	4369.64
Surface Water Migration Pathway Score (S_{sw})	*	*
Soil Exposure Pathway Score (S_s)	*	*
Air Migration Pathway Score (S_a)	*	*
$(S_{gw}^2 + S_{sw}^2 + S_{se}^2 + S_{am}^2)$		4369.64
$(S_{gw}^2 + S_{sw}^2 + S_{se}^2 + S_{am}^2) / 4$		1092.41
Square Root of $(S_{gw}^2 + S_{sw}^2 + S_{se}^2 + S_{am}^2) / 4$		33.05

Pathway evaluated, but not assigned a score (explain):

* Surface Water – pathway was evaluated but not assigned a score as there are no drinking water intakes, commercial fishing, and sensitive receptors along this path.

* Soil Exposure – pathway was evaluated but not assigned a score because the site is completely paved and fenced, and there are no daycares, schools within 200 feet.

* Air Migration – pathway was evaluated but not assigned a score because the site is completely paved and fenced, and there are no daycares within 200 feet.

GW-1

GROUNDWATER MIGRATION PATHWAY SCORESHEET

Likelihood of Release	Maximum Value	Score	Rationale	Data Quality
1. Observed Release	550	<u>0</u>	<u>1</u>	<u> </u>
2. Potential to Release				
2a. Containment	10	<u>10</u>	<u>2</u>	<u>H</u>
2b. Net Precipitation Value	10	<u>1</u>	<u>3</u>	<u>H</u>
2c. Depth to Aquifer Value	5	<u>5</u>	<u>4</u>	<u>H</u>
2d. Travel Time	35	<u>25</u>	<u>5</u>	<u>H</u>
2e. Potential to Release [lines 2a x (2b+2c+2d)]	500	<u>310</u>	<u> </u>	<u> </u>
3. Likelihood of Release (line 1 or 2e)	550	<u>310</u>	<u> </u>	<u> </u>
Waste Characteristics				
4. Toxicity/ Mobility	(a)	<u>100</u>	<u>6</u>	<u>H</u>
5. Hazardous Waste Quantity	(a)	<u>10</u>	<u>7</u>	<u>E</u>
6. Waste Characteristics (Lines 4 x 5, then use Table 2-7)	100	<u>6</u>	<u> </u>	<u> </u>
Targets				
7. Nearest Well Value	50	<u>5</u>	<u>8</u>	<u>H</u>
8. Population				
8a. Level I Concentrations	(b, c)	<u>0</u>	<u> </u>	<u> </u>
8b. Level II Concentrations	(b, c)	<u>0</u>	<u> </u>	<u> </u>
8c. Potential Contamination	(b, c)	<u>2,922</u>	<u>9</u>	<u>H</u>
8d. Population (lines 8a+8b+8c)	(b)	<u>2,922</u>	<u> </u>	<u> </u>
9. Resources	5	<u>5</u>	<u>10</u>	<u>H</u>
10. Wellhead Protection Area	20	<u>0</u>	<u>11</u>	<u>H</u>
11. Targets (lines 7+8d+9+10)	(b)	<u>2,932</u>	<u> </u>	<u> </u>

Aquifer Score

12. Aquifer Score [(lines 3x6x11)/82500 100
Subject to a Maximum of 100]

66.10

GROUNDWATER MIGRATION PATHWAY SCORE

13. Pathway Score (Sgw) 100
(Highest score from line 12 for all aquifers
evaluated, subject to a maximum of 100)

66.10

- (a) Maximum value applies to waste characteristics category.
(b) Maximum value not applicable.
(c) Value computed on attached calculation sheet.

AQUIFER EVALUATED: Exposition Aquifer

GROUNDWATER PATHWAY CALCULATIONS FOR POPULATION

Well Identifier	Contaminant Detected	Contaminant Concentration (Note Units)	Benchmark (Note Units)	Apportioned Level Multiplier* (A)	Apportioned Population Well Serves (B)	Actual Contamination Factor (AxB)

SUM LEVEL I CONCENTRATIONS

SUM LEVEL II CONCENTRATIONS

*** Level Multipliers:**

Level I = 10.

Level II = 1.

POTENTIAL CONTAMINATION

Distance Ring (Miles)	Number of Wells Within Distance Ring	Population Served by Wells Within Distance Ring	Distance Weighted Population Values (Table 3-12)
0.00 to 0.25	0	0	0
>0.25 to 0.50	0	0	0
>0.50 to 1.00	0	0	0
>1.00 to 2.00	9	39,249	9,385
>2.00 to 3.00	14	62,643	6,778
>3.00 to 4.00	27	185,098	13,060
POTENTIAL CONTAMINATION: SUM/10			29,223
			2,922

AQUIFER EVALUATED Exposition Aquifer

HRS RATIONALE

Continental Heat Treating

Groundwater Migration Pathway

1) Likelihood of Release

An observed release could not be established at this time because of a lack of sampling for groundwater. Hence, a score of zero (0) is being assigned to "Observed Release".

Sources: U.S. Environmental Protection Agency, 40 CFR Part 300, Hazard Ranking System Final Rule, Federal Register, Volume 55, Number 241, December 14, 1990.

Site Assessment Report, Continental Heat Treating, 10643 South Norwalk Boulevard, Santa Fe Springs, California, prepared by Environmental Support Technologies, May 6, 1997.

Multi-Depth Soil Gas Survey Report, Continental Heat Treating, 10643 South Norwalk Boulevard, Santa Fe Springs, California, prepared by Environmental Support Technologies, May 8, 1996.

Site Investigation Report, Continental Heat Treating, 10643 South Norwalk Boulevard, Santa Fe Springs, California, prepared by Green Environmental, Inc., March 20, 1995.

2) Potential to Release

A potential to release is being projected based on the following factors:

Volatile organic compounds are found in the Site's soil vapor to 60'. Groundwater is at 68' feet below ground surface (bgs). Groundwater underlying this area is unconfined aquifers. The aquifer evaluated was the Exposition Aquifer. There is interconnection between the Exposition and the Gage-Gardena Aquifers, and also between the Exposition and the Hollydale Aquifers, within 2 miles of the site. Both the Gage-Gardena and the Hollydale Aquifers are used for drinking water. Therefore, a potential to release is projected.

A score of ten (10) is assigned for "Containment" factor because of the absence of an engineered liner and potential hydraulic continuity of the aquifers to the surface.

Sources: State of California Department of Water Resources, Bulletin #104,
U.S. Environmental Protection Agency, 40 CFR Part 300, Hazard
Ranking System Final Rule, Federal Register, Volume 55, Number
241, December 14, 1990.

Site Assessment Report, Continental Heat Treating, 10643 South
Norwalk Boulevard, Santa Fe Springs, California, prepared by
Environmental Support Technologies, May 6, 1997.

Multi-Depth Soil Gas Survey Report, Continental Heat Treating,
10643 South Norwalk Boulevard, Santa Fe Springs, California,
prepared by Environmental Support Technologies, May 8, 1996.

Site Investigation Report, Continental Heat Treating, 10643 South
Norwalk Boulevard, Santa Fe Springs, California, prepared by Green
Environmental, Inc., March 20, 1995.

3) Net Precipitation Value:

A value of one (1) is assigned. The Site exists within the central region of the County of Los Angeles as shown in Figure 3-2, Net Precipitation Factor Values.

Sources: U.S. Environmental Protection Agency, 40 CFR Part 300, Hazard
Ranking System Final Rule, Federal Register, Volume 55, Number
241, December 14, 1990.

4) Depth to Aquifer Value:

A value of five (5) is assigned because the aquifer of concern is within the category range of "less than or equal to 25 feet", as shown in Figure 3-5, Depth to Aquifer Factor Values. Fifty-two (52) wells owned by eleven (11) local water purveyors located within a 4-mile radius of the Site were evaluated. All draw water from the Gage-Gardena, and Hollydale aquifers. As has been reported, these aquifers are in hydraulic continuity with the surface and first groundwater is encountered at approximately 68 feet bgs. Depth of lowest known contamination based on existing records is approximately sixty (60) feet bgs.

Sources: State of California Department of Water Resources, Bulletin #104,
U.S. Environmental Protection Agency, 40 CFR Part 300, Hazard
Ranking System Final Rule, Federal Register, Volume 55, Number
241, December 14, 1990.

Site Assessment Report, Continental Heat Treating, 10643 South Norwalk Boulevard, Santa Fe Springs, California, prepared by Environmental Support Technologies, May 6, 1997.

Multi-Depth Soil Gas Survey Report, Continental Heat Treating, 10643 South Norwalk Boulevard, Santa Fe Springs, California, prepared by Environmental Support Technologies, May 8, 1996.

Site Investigation Report, Continental Heat Treating, 10643 South Norwalk Boulevard, Santa Fe Springs, California, prepared by Green Environmental, Inc., March 20, 1995.

5) Travel Time:

Lithologic description from Continental Heat Treating boring logs characterize the soil as variable sand, silt and clay from approximately five feet to sixty feet bgs. A value of 10^{-4} centimeter per second (cm/s) is assigned from Table 3-6, Hydraulic Conductivity of Geologic Materials. A value of twenty-five (25) is assigned for "Travel time" factor, as shown in Table 3-7, Travel Time Factor Values.

Sources: U.S. Environmental Protection Agency, 40 CFR Part 300, Hazard Ranking System Final Rule, Federal Register, Volume 55, Number 241, December 14, 1990.

Site Assessment Report, Continental Heat Treating, 10643 South Norwalk Boulevard, Santa Fe Springs, California, prepared by Environmental Support Technologies, May 6, 1997.

Multi-Depth Soil Gas Survey Report, Continental Heat Treating, 10643 South Norwalk Boulevard, Santa Fe Springs, California, prepared by Environmental Support Technologies, May 8, 1996.

Site Investigation Report, Continental Heat Treating, 10643 South Norwalk Boulevard, Santa Fe Springs, California, prepared by Green Environmental, Inc., March 20, 1995.

6) Toxicity/Mobility:

From Appendix B-1 (Hazardous Substances Factor Values, Tables for Non-Radioactive Hazardous Substances, Superfund Chemical Data Matrix, Version: July 95), a value of 100 is assigned for toxicity/mobility:

TABLE 1: HAZARDOUS SUBSTANCES OBSERVED IN SOIL

CONTAMINANT	BENCHMARK CONCENTRATION (g/kg)		MAXIMUM CONCENTRATION OBSERVED (g/kg)	TOXICITY FACTOR	MOBILITY FACTOR	TOXICITY / MOBILITY PRODUCT
	PRG	SSL 20				
Tetrachloroethylene	16,000	60	7,514	100	1	100

Benchmark Concentrations are based on Preliminary Remedial Goals.

Sources: U.S. EPA Superfund Chemical Data Matrix, Version: July 1995.

Site Investigation Report, Continental Heat Treating, 10643 South Norwalk Boulevard, Santa Fe Springs, California, prepared by Green Environmental, Inc., March 20, 1995.

7) Hazardous Waste Quantity:

The hazardous waste quantity cannot be determined for this site. Therefore, the default factor value of 10 is assigned.

Source: U.S. Environmental Protection Agency, 40 CFR Part 300, Hazard Ranking System Final Rule, Federal Register, Volume 55, Number 241, December 14, 1990

8) Nearest Wells:

A target factor value of 5 is assigned for the nearest well location, using Table 3-11. Groundwater beneath the site is a major source of drinking water in the area. There are nine drinking water wells from within the 1- to 2-mile radius of the site.

Source: U.S. Environmental Protection Agency, 40 CFR Part 300, Hazard Ranking System Final Rule, Federal Register, Volume 55, Number 241, December 14, 1990

9) Potential Contamination (PC):

A value of 2,922 is assigned for PC Population targets, using Table 3-12 and the PC equation. The following discussion describes the rationale for assigning the PC. Wells designated as destroyed, inactive, or standby were not included in this calculation.

Table 2
Distance-Weighted Population Value

Distance (miles)	Purveyor	No. of Wells	Population Served by individual well	Total	Population Served w/in distance ring
1- to 2-mile	SFS	1	9,737	9,737	
	SCWC	5	2,700	13,500	
	Pico Rivera	2	5,625	11,250	
	Downey	1	4,762	4,762	
					39,249
2- to 3-mile	SCWC	1	2,700	2,700	
	Pico Rivera	2	5,625	11,250	
	McGee	1	538	538	
	Downey	5	4,762	23,810	
	Norwalk	2	7,672	15,345	
	Park	3	3,000	9,000	
					62,643
3- to 4-mile	SFS	1	9,737	9,737	
	LHH	4	1,575	6,300	
	Pico Rivera	4	5,625	22,500	
	Downey	12	4,762	57,144	
	Park	1	3,000	3,000	
	Pico	2	3,857	7,714	
	SG Valley	2	38,414	76,828	
	BS	1	1,875	1,875	
					185,098

SFS - City of Santa Fe Springs
LHH - City of La Habra Heights
SCWC - Southern California Water Company
Pico Rivera - City of Pico Rivera
McGee - Laurence McGee School
Downey - City of Downey
Norwalk - City of Norwalk
Park WC- Park Water Company
Pico WD - Pico Water District
SG Valley - San Gabriel Valley Water Company
BS – Bellflower/Somerset

Table 3
Potential Contamination Calculation

Distance Ring (miles)	# of wells	Population served	Distance weighted from Table 3-12
>1.0-2.0	9	39,249	9,385
>2.0-3.0	14	62,643	6,778
>3.0-4.0	27	185,098	13,060
-	-	-	Sum/10=2,922

The City of Santa Fe Springs (SFS) operates a blended drinking water system. Currently, the SFS obtains 50% of its drinking water from groundwater and 50% from surface water. No well contributes greater than 40 percent to the system. The two (2) wells operated by the City of Santa Fe Springs are within 4 miles of the site.

Population served by SFS = 38,950 people

Groundwater population served by individual well = $38,950(0.50)/2 = 9,737$ people.

The City of La Habra Heights (LHH) operates a drinking water system. Currently, the LHH obtains 100% of its drinking water from groundwater. No well contributes greater than 40 percent to the system. All 4 of the wells operated by the LHH are within 4 miles of the site.

Population served by LHH= 6,300 people

Groundwater population served by individual well = $6,300/4 = 1575$ people.

The Southern California Water Company-Norwalk (SCWC) operates a blended drinking water system. Currently, the SCWC obtains 36% of its drinking water from groundwater and 64% from surface water. No well contributes greater than 40 percent to the system. All 6 of the wells operated by the SCWC are within 4 miles of the site.

Population served by SCWC = 45,000 people

Groundwater population served by individual well = $45,000 (0.36) = 16,200/6 = 2700$ people.

The City of Pico Rivera operates a drinking water system that currently obtains 100% of its drinking water from groundwater. No well contributes greater than 40 percent to the system. All eight (8) of the wells operated by the City of Pico Rivera are within 4 miles of the site.

Population served by Pico Rivera = 45,000 people
Groundwater population served by individual well = $45,000/8 = 5,625$ people.

Laurence McGee School operates a well that serves approximately 500 people. Currently, Laurence McGee School obtains all of its drinking water from groundwater. This well operated by the Laurence McGee School is within 4 miles of the site.

Population served by Laurence McGee = 538 people
Groundwater population served by individual well = $538/1 = 538$ people.

The City of Downey (Downey) operates a drinking water system that consists of twenty-one (21) wells that serve approximately 100,000 people. Currently, Downey obtains all of its drinking water from groundwater. No well contributes greater than 40 percent to the system. Eighteen (18) of the twenty-one (21) wells operated by the City of Downey are within 4 miles of the site.

Population served by Downey = 100,000 people
Groundwater population served by individual well = $100,000/21 = 4,761.9$ people.

The City of Norwalk (Norwalk) operates a drinking water system that consists of 2 wells that serve 15,345 people. Currently, Norwalk obtains 100% of its drinking water from groundwater. No well contributes greater than 40 percent to the system. All wells operated by the Norwalk are within 4 miles of the site.

Population served by Norwalk = 15,345 people
Groundwater population served by individual well = $15,345/2 = 7672$ people.

The Park Water Company (Park) operates a blended drinking water system that consists of 4 wells that serve approximately 60,000 people. Currently, the Park Water Company obtains 20% of its drinking water from groundwater and 80% from surface water. No well contributes greater than 40 percent to the system. All 4 of the wells operated by the Park Water Company are within 4 miles of the site.

Population served by Park = 60,000 people
Groundwater population served by individual well = $60,000 (0.20) = 12,000/4 = 3000$ people.

The Pico Water District (Pico) operates a drinking water system that consists of 7 wells that serve approximately 27,000 people. Currently, Pico obtains all of its drinking water

from groundwater. No well contributes greater than 40 percent to the system. Two (2) of the seven (7) wells operated by Pico are within 4 miles of the site.

Population served by Pico = 27,000 people

Groundwater population served by individual well = $27,000/7 = 3,857$ people.

The San Gabriel Valley Water Company operates a drinking water system that consists of 4 wells that serve approximately 153,000 people. Currently, the San Gabriel Valley Water Company obtains all of its drinking water from groundwater. No well contributes greater than 40 percent to the system. Two (2) of the wells operated by the San Gabriel Valley Water Company are within 4 miles of the site.

Population served by San Gabriel Valley Water Company = 153,657 people

Groundwater population served by individual well = $153,657/4 = 38,414$.

The Bellflower/Somerset (B/S) Mutual Water Company operates a blended drinking water system that consists of 16 wells that serve approximately 25,000 people. Currently B/S obtains 12% its drinking water from groundwater and 78% from surface water. No well contributes greater than 40 percent to the system. One (1) of the sixteen (16) wells are within 4 miles of the site.

Population served by B/S = 25,000 people

Groundwater population served by individual well = $25,000(0.12) = 3,000/16 = 1,875$ people.

Sources: Wen, Jason, Southern California Water Company/Norwalk, Department of Toxic Substances Control (DTSC) Information Request Letter, December 29, 2000 and follow up call by Lori Parnass, DTSC, January 3, 2001.

Diaz, Adrian, City of Pico Rivera Water Department, DTSC Information Request Letter and follow up call by Lori Parnass, DTSC, February 7, 2001.

Hughes, Ron, City of Santa Fe Springs Water Department, DTSC Information Request Letter, January 2, 2001 by Lori Parnass, DTSC.

McDonnell, Frank, City of Downey Water Department, DTSC Information Request Letter, December 21, 2000 and follow up call by Lori Parnass, DTSC, February 7, 2001.

Lynch, Gary, Park Water Company, DTSC Information Request Letter, January 5, 2001.

Ford, Noel, City of Norwalk Water Department, DTSC Information Request Letter, January 5, 2001.

Zastrow, William, Peerless Water Company, DTSC Information Request Letter, January 2, 2001.

Laurence McGee School, DTSC Information Request Letter, January 5, 2001 and follow up call by Lori Parnass, DTSC, with Water Reserve District representative Wanjiru Njuguna, February 7, 2001.

Zampielo, Anthony, La Habra Heights CWD, DTSC Information Request Letter, January 5, 2001.

Arrighi, Dan, San Gabriel Valley Water Company, DTSC Information Request Letter, January 2, 2001.

Wendell, Carl, Bellflower-Somerset Mutual Water Company, DTSC Information Request Letter, January 5, 2001.

10) Resources:

A Resources Factor Value of 5.0 is assigned because groundwater from the aquifer being evaluated is used as an ingredient in commercial food preparation at local food processing businesses.

11) Wellhead Protection Areas:

A score of zero (0) is assigned because there are currently no Wellhead Protection Areas in California.